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OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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OPINION 340

Validation, under the Plenary Powers, of *dentatus*
Diesing, 1839, as published in the combination *Stephan-
urus dentatus*, as the specific name for the Kidney Worm
of Swine



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OPINION 340

VALIDATION, UNDER THE PLENARY POWERS, OF “DENTATUS” DIESING, 1839, AS PUBLISHED IN THE COMBINATION “STEPHANURUS DENTATUS”, AS THE SPECIFIC NAME FOR THE KIDNEY WORM OF SWINE

RULING :—(1) Under the Plenary Powers the specific name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, is hereby validated.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Nos. 845 and 846 respectively :—(a) *Stephanurus* Diesing, 1839 (gender : masculine) (type species, by monotypy : *Stephanurus dentatus* Diesing, 1839) ; (b) *Oesophagostomum* Molin, 1861 (gender : neuter) (type species, by selection by Stiles & Hassall (1905) : *Strongylus dentatus* Rudolphi, 1803, as defined by the descriptions and figures published by Goodey (T.) (1924, *J. Helminth.* 2(1) : 1—14, figs. 1—15)).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Nos. 452 and 453 respectively :—(a) *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus* (specific name of type species of *Stephanurus* Diesing, 1839) ; (b) *dentatus* Rudolphi, 1803, as published in the combination *Strongylus dentatus* and as interpreted in (2)(b) above (specific name of type species of *Oesophagostomum* Molin, 1861).

I.—THE STATEMENT OF THE CASE

The question of the availability of the specific name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, was first brought to notice in a communication addressed

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to the Commission on 27th January 1945 by Dr. Ellsworth C. Dougherty (at that time of the *Department of Zoology* and now of the *Department of Physiology, University of California, Berkeley, California, U.S.A.*). This communication led ultimately, as explained in paragraph 5 below, to the submission to the Commission of the following application :—

**On the question of the correct name for the type species of the genus
“*Stephanurus*” Diesing, 1839 (Class Nematoda*, Order Rhabditida), with recommendations for the placing of certain names
on the “Official Lists”**

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Introduction

1. The type species, which is also the only generally recognized species, of *Stephanurus* Diesing, 1839—a strongyline genus placed by Chitwood and Chitwood (1937) in a subfamily STEPHANURINAE Railliet, Henry, and Bauche, 1919, of the family SYNGAMIDAE Leiper, 1912—is generally known as *Stephanurus dentatus* Diesing, 1839. It is the kidney worm of swine (*Sus scrofa*) and an organism of cosmopolitan distribution and considerable economic importance. Because of its prominence as a parasite of a domestic animal and the resulting close scrutiny it must suffer, it is rather surprising that in recent years the question of its specific name has not received more attention. It is now possible to say that certain facts in its history make apparent that the specific trivial name of Diesing (1839) can be used only if the International Commission on Zoological Nomenclature invokes its Plenary Powers. A detailed history of earlier papers was given by Tayler (1900); and the essential points in the nomenclatorial history have been more recently reviewed in a paper originating from the Imperial Bureau of Agricultural Parasitology, England, and apparently written by B. G. Peters (i.e., B.G.P., 1931), but therein the nomenclatorial issues were not directly faced.

2. An earlier draft of the present paper was first submitted to the International Commission in 1945. In its original form it dealt with problems, certain of which have subsequently been clarified by action of the International Commission and of the International Congress of Zoology at the historic Paris meetings in July, 1948. The following month (in August, 1948) the author visited Mr. Francis Hemming,

* The classification preferred by the author is to consider Nematoda a Phylum divided into Classes Phasmidea (including the Order Rhabditida) and Aphasmeida.

Secretary to the International Commission ; and it was at that time agreed between them that, if pertinent matters were still to be raised, the paper should be rewritten in light of decisions taken at the Paris Meetings and resubmitted. I have delayed doing this until the "Official Record of Proceedings of the International Commission on Zoological Nomenclature at their Session held in Paris in July, 1948" could be published. Now that such has been done in Volume 4 of *The Bulletin of Zoological Nomenclature*, I have reviewed the earlier draft and rewritten it. It is hereby resubmitted.

3. In the original draft a major problem, now essentially solved, dealt with questions of secondary homonymy (see 1950, *Bull. zool. Nomencl.* 4 : 118—125, for conclusions of the International Commission, as approved by the Congress, on the subject of homonyms in zoological nomenclature). It is my feeling, however, that despite this considerable clarification it is desirable that the Commission consider a case of secondary homonymy and render an *Opinion* applying the new regulations ; in this way, as is pointed out later herein, one minor problem may be definitely solved. To ensure this end, I am reviewing in section II the main historical points and presenting in section III an analysis of the nomenclatorial problem.

4. A major consideration in regard to the name to be used for the kidney worm of swine still remains—namely, the question of a decision on the part of the Commission as to whether it might be better in the interests of stability to secure the use of the trivial name *dentatus* of Diesing, 1839, by exercise of Plenary Powers. Suggestions on this point are put forth in section IV.

5. Finally, it is recommended in section V that certain generic names considered herein (particularly *Stephanurus* Diesing, 1839) be placed on the *Official List of Generic Names in Zoology* and certain trivial names on the *Official List of Specific Trivial Names in Zoology*.

II. Review of the Nomenclatorial History

6. The kidney worm of swine was first described by Diesing (1839) as *Stephanurus dentatus*, only species of a new genus *Stephanurus*. The modernness of Diesing's conception is apparent from the fact that today it is still generally known by that name. Indeed, if Diesing's nomenclatorial treatment had been uniformly observed, there would be no basis for questioning the specific trivial name *dentatus*. Confusion arises, however, because there exists from the same host another strongyline species (Order Rhabditida) with the same trivial name, namely, one of the nodular worms of swine, now known as *Oesophagostomum dentatum* (Rudolphi, 1803) Molin, 1861 (originally *Strongylus dentatus* Rudolphi, 1803). Because of the fact that all strongyline worms with relatively well-developed bursae in the male were grouped by many

nineteenth century helminthologists into one or two genera, i.e., *Strongylus* Müller, 1780, and *Sclerostoma* Rudolphi, 1809, it would not be surprising if at one time or another both *Stephanurus dentatus* and *Oesophagostomum dentatum* were to be included under a single genus. This has actually occurred as is shown in the following historical summary.

7. The important facts in the nomenclatorial history of the kidney worm are as follows :—

- (i) Diesing (1839 : 232—233), as already noted, described the kidney worm of swine as *Stephanurus dentatus*, only species of a new genus *Stephanurus*.
- (ii) Leidy (1856 : 54) referred to nematodes, apparently one of the nodular worms of swine, briefly : *Sclerostoma dentatum*, Rud. Several specimens, male and female, were obtained from the liver of the hog, *Sus scrofa*.
- (iii) White (1859 : 428), described specimens of the kidney worm as *Stephanurus dentatus*, but apparently confused these with the worms reported by Leidy, as implied by the title of his paper : “Dr. James C. White exhibited specimens and figures of *Stephanurus dentatus*, Diesing, *Sclerostomum dentatum* ? Rudolphi” ; he thus implied that the kidney worm might be the same as *Strongylus dentatus* Rudolphi, 1803 (now known as *Oesophagostomum dentatum*).
- (iv) Verrill (1870a : 248—249 ; 1870b : 137—138 ; 1870c) described the kidney worm under the name *Sclerostoma pinguicola* ; he was ignorant of Diesing’s description.
- (v) Dean (1874 : 62—63) described very well the gross pathology produced by *Strongylus* [= *Stephanurus*] *dentatus* without indicating whether it was Rudolphi’s or Diesing’s name he had in mind.
- (vi) Cobbold (1879 : 412) recommended the new name *Stephanurus nattereri* as a possible substitute for *Stephanurus dentatus* in order to avoid confusion with *Sclerostoma* [= *Oesophagostomum*] *dentatum*.
- (vii) De Magalhães (1894) published a study of the morphology of the kidney worm. He concluded that it belonged in the genus *Strongylus* and accepted for it the name “*Strongylus* (*Sclerostomum*) *pinguicola* (Verrill).”
- (viii) Railliet (1896 : 160) synonymized *Stephanurus* with *Sclerostoma* and accepted *Sclerostoma pinguicola* of Verrill (1870).
- (ix) Tayler (1900 : 626) also regarded *Stephanurus* Diesing, 1839, as a synonym of *Sclerostoma* Rudolphi, 1809. She accordingly accepted *Sclerostoma pinguicola* Verrill, 1870, as the

correct name of the kidney worm and placed *Stephanurus dentatus*, *Stephanurus nattereri*, and *Strongylus dentatus* of Dean (1874) as synonyms thereof ; she regarded *Sclerostoma dentatum* of Leidy (1856) as what is now *Oesophagostomum dentatum*.

- (x) Neither de Magalhães, Railliet, nor Tayler specifically formed a combination between Diesing's trivial name *dentatus* and the generic names to which they in effect transferred it ; however, all three rejected it as a homonym.
- (xi) Drabble (1922, 1923) described the kidney worm under the new name *Sclerostomum renium*, claiming that it was distinct from "*Sclerostoma pinguicola* (syn. *Stephanurus dentatus*)". However, Cameron and Clunies Ross (1924) have shown conclusively that Drabble's species is the same as Diesing's.
- (xii) De Almeida (1928) described as *Stephanurus morai* specimens that Peters (1931) has shown also to belong to Diesing's species.
- (xiii) Peters (1931) and others, both previously and subsequently, reverted to the trivial name *dentatus* with their recognition of genus *Stephanurus* as independent.

III. Discussion of the Nomenclatorial Problems

8. It is apparent from the foregoing historical summary that :—

- (i) There are two species of nematodes parasitic in swine bearing the same trivial name, *dentatus*, but originally described in separate genera ;
- (ii) Apparent confusion existed between these two species or at least between their names in the works of certain early writers (White, Dean), but these writers did not specifically regard or reject the later trivial name, *dentatus* of Diesing, 1839, as a homonym of earlier trivial name, *dentatus* of Rudolphi, 1803.
- (iii) Later workers (de Magalhães, Railliet, Tayler) recognised both species and regarded them as congeneric, uniting them either in the genus *Strongylus* Müller, 1780, or in the genus *Sclerostoma* Rudolphi, 1809 ; they rejected the later name, *dentatus* of Diesing, 1839, as a homonym of the earlier, *dentatus* of Rudolphi, 1803, without, however, specifically forming a combination between the later trivial name and the new generic names to which it was transferred.

9. The International Congress at the Paris Meeting officially recognised for the first time two categories of homonymy—primary and secondary. Inasmuch as the two nematodes parasitic in swine

were originally described in separate genera, their trivial names cannot, in accordance with the definition of primary homonymy provided by the International Congress, be regarded as primary homonyms.

10. Under the definition of secondary homonymy drawn up by the International Commission at its Paris Meetings and subsequently approved by the Congress, a secondary homonym is to be regarded as having been rejected and hence permanently suppressed only if specifically recognised and rejected as such. This was not the case with either White (1859) or Dean (1874). White in effect implied, probably inadvertently, that the kidney worm of swine and that species of nodular worm occurring in the same host and originally given the trivial name *dentatus* by Rudolphi (1803) were conspecific. This synonymy was subsequently (and is at present) recognised to be untrue. Dean, in designating the kidney worm *Strongylus dentatus*, created a condition of secondary homonymy, but did not recognise and reject the trivial name *dentatus* of Diesing, 1839.

11. The position is quite otherwise in the case of de Magalhães (1894), Railliet (1896) and Tayler (1900), for each of these authors is to be regarded as having definitely recognised, in their estimation, *dentatus* of Diesing, 1839, to be a secondary homonym of *dentatus* of Rudolphi, 1803, and as having accordingly rejected the former. It was decided by the Congress at Paris, on the recommendation of the Commission, that, wherever a trivial name is clearly rejected as a secondary homonym prior to midnight G.M.T., December 31st, 1950/January 1st, 1951, such rejection is to be accepted as valid, and the trivial name in question is to be permanently suppressed. It is seemingly clear, therefore, that under this rule (to be formally constituted in an Article in the forthcoming edition of the *Règles Internationales de la Nomenclature Zoologique*), the specific trivial name *dentatus* of Diesing, 1839, is no longer available for the kidney worm of swine unless it is preserved by the International Commission under its Plenary Powers.

12. However, it has been my experience that some zoologists have held that homonymy does not exist unless a combination of generic and trivial name has been made so that identical specific names exist for two species, of which the trivial name of one (the later) then becomes a homonym. This would seem to be, as the Secretary of the International Commission might express it, a somewhat "ritualistic" requirement and not a necessary or even reasonable interpretation of the present rulings. However, in order to obviate any doubt, it is to be hoped that the International Commission will issue a ruling on this point in the form of a *Declaration*.

IV. The Correct Name for the Kidney Worm of Swine

13. As de Magalhães (1894), Railliet (1896), and Tayler (1900) are presumably to be regarded as having rendered Diesing's *dentatus*

unavailable, the next trivial name to be considered for the kidney worm of swine is the subjective synonym *pinguicola* of Verrill, 1870. There is no prior usage of this trivial name in the Nematoda, and therefore the kidney worm would become *Stephanurus pinguicola* (Verrill, 1870) comb. nov. The names *Stephanurus nattereri* Cobbold, 1879, *Sclerostomum renium* Drabble, 1923, and *Stephanurus morai* de Almeida, 1928, would fall as subjective synonyms thereof.

14. The synonymy of *S. pinguicola* would be as follows :

Stephanurus pinguicola (Verrill, 1870) comb. nov.

Synonyms :

Stephanurus dentatus Diesing, 1839 ; *Sclerostoma pinguicola* Verrill, 1870 ; *Strongylus dentatus*, of Dean, 1874 [*non Strongylus dentatus* Rudolphi, 1803] ; *Stephanurus nattereri* Cobbold, 1879 ; “*Sclerostomum pinguicola* Verrill, 1870”, of de Magalhães, 1894 ; *Strongylus* (*Sclerostomum*) *pinguicola* (Verrill, 1870) de Magalhães, 1894 ; *Sclerostomum renium* Drabble, 1922 ; *Stephanurus morai* de Almeida, 1928.

15. The question now arises as to whether the foregoing change is in the best interests of nomenclatorial stability and uniformity. *Stephanurus dentatus* Diesing, 1839, is a widely used name for an important parasite. Might it not be the wiser procedure to seek to establish this name through an appeal to the International Commission's Plenary Powers ?

16. A solution to the foregoing problems would appear to me to be best realised by canvassing a representative group of parasitologists concerned with problems of nomenclature. As one such person, I should myself favour permitting the regular application of the *Règles* to this case for the reasons that :

- (i) The occurrence of two relatively closely related parasitic species having the same trivial name (*Stephanurus dentatus* and *Oesophagostomum dentatum*) in the same host should, if possible, be avoided.
- (ii) I am not convinced that the dislocation of a change in the trivial name (*dentatus*) of the kidney worm of swine would be serious in view of the stability of its generic name (*Stephanurus*).
- (iii) The suspension of the *Règles* in this case would, I believe, tend to weaken their stability in the long run, for the issue, without the invocation of Plenary Powers, is apparently clear-cut from the nomenclatorial viewpoint and would thereby serve as a good example of the application of the new rulings on secondary homonymy.

V. Recommendation for the placing of certain names on the "Official Lists"

17. At the present time the genus *Stephanurus* Diesing, 1839, has but one recognized species, originally designated *Stephanurus dentatus* by Diesing (1839). The genus has been generally recognized as independent for almost 50 years. It therefore seems desirable that its name be placed on the *Official List of Generic Names in Zoology* with type species *Stephanurus dentatus* Diesing, 1839 (subjective synonym, *Sclerostoma pinguicola*, Verrill, 1870=*Stephanurus pinguicola* (Verrill, 1870) comb. nov.). Depending upon the ultimate decision of the International Commission, either the trivial name *dentatus* of Diesing will (under Plenary Powers) be validated for the kidney worm of swine, or it must be rejected. In either event, the valid trivial name of the species should be included in the *Official List of Specific Trivial Names in Zoology*. I therefore recommend that on the basis of the action of the International Commission either the trivial name *dentatus* Diesing, 1839, as published in the binominal combination *Stephanurus dentatus*, or the trivial name *pinguicola* Verrill, 1870, as published in the binominal combination *Sclerostoma pinguicola*, be so placed. If *dentatus* of Diesing, 1839, is not preserved under Plenary Powers, it must be placed on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

18. Finally, in order that the decision to be taken in the present case may be as complete as possible, I recommend that, when stabilizing the name of the kidney worm of swine, the International Commission should also stabilize the name of the common nodular worm of swine discussed in the present paper. The earliest name for this form, as now accepted generally, is *Strongylus dentatus* Rudolphi, 1803. Careful check in Stiles and Hassall's *Index-Catalogue of Medical and Veterinary Zoology. Subjects: Roundworms . . .* (1920, U.S. Hyg. Lab. Bull. 114) reveals no problem of homonymy as regards this name. However, there are now known four species of nodular worms in domestic swine and in all probability it cannot be stated with absolute certainty to which of these Rudolphi's name applied. It seems, nevertheless, almost certain that the commonest of these, to which the trivial name *dentatum*, in the binominal combination *Oesophagostomum dentatum*, is now universally applied, was one of the species, probably the only one studied by him. Accordingly, I propose that the International Commission place on the *Official List of Specific Trivial Names in Zoology*, along with the name recognized by them as valid for the kidney worm of swine, whichever that may be, the trivial name *dentatus* Rudolphi, 1803, as published in the binominal combination *Strongylus dentatus*, an indication being made by the International Commission at the same time that this trivial name is to be identified by reference to the definitive description and figures published for this species by Goodey (1924, pp. 1—14, figs. 1—15).

19. As already explained, this species is currently referred by specialists to the genus *Oesophagostomum* Molin, 1861, of which it is regarded as type by reason of its selection by Stiles and Hassall (1905 : 124).*

I therefore also ask that the generic name *Oesophagostomum* Molin, 1861 (type species, by subsequent selection (Stiles and Hassall, 1905) : *Strongylus dentatus* Rudolphi, 1803, defined as already indicated) be placed on the *Official List of Generic Names in Zoology*.

VI. Summary

20. A survey of the nomenclatorial history and status of the species generally known as *Stephanurus dentatus* Diesing, 1839, the kidney worm of swine, has been presented. Evidence has been given that, under the recent rulings given by the Congress on the advice of the International Commission at the Paris Meetings, *dentatus* of Diesing, 1839, must be considered as an invalid secondary homonym of the trivial name *dentatus* of Rudolphi, 1803, by reason of the rejection of the former by Railliet and others when the two species so named were placed by them in a single genus (*Strongylus* Müller, 1780, or *Sclerostoma* Rudolphi, 1809).

21. The fact that in no case did the authors specifically rejecting the trivial name *dentatus* of Diesing, 1839, make actual combinations of this trivial name with the generic names mentioned in paragraph 20 and thus did not actually create the homonymous combinations raises a point not explicitly covered in the emended rulings formulated by the International Commission at the Paris Meetings to cover secondary homonymy. Some zoologists have held that an actual citation of a homonymous specific name is necessary before the trivial name

* Prior to the clarification of Article 30 by the XIII International Congress of Zoology at Paris in July, 1948, it would have been a matter of doubt whether the action by Stiles and Hassall constituted a valid selection of the above species as type of *Oesophagostomum* (a) because Molin (1861) included *Strongylus dentatus* Rudolphi, 1803, in this genus only by (i) referring (p. 443) to it once in the discussion of the genus as *Oesophagostomum dentatum*, but (ii) later in the discussion of individual species merely citing (p. 445) the name *Strongylus dentatus* as a synonym of a newly named nominal species (*Oesophagostomum subulatum* Molin, 1861) and because (b) Stiles and Hassall, when making their selection for the genus *Oesophagostomum*, cited the type as follows : "*O. subulatum* = *O. dentatum* (Rudolphi)." Inasmuch as *O. subulatum* was recorded by Stiles and Hassall as the more recent of the two names, one is, I feel, entitled to interpret their action as selecting *O. dentatum* (= *Strongylus dentatus*) as type, of which *O. subulatum* was a synonym. Under the decision of the XIII International Congress of Zoology already referred to, it may be seen that *Strongylus dentatus* Rudolphi, 1803, is to be regarded as an originally included species of the genus *Oesophagostomum* Molin, 1861, and that the method used by Stiles and Hassall in selecting the type species of this genus constitutes a valid selection of Rudolphi's species (see 1950, *Bull. zool. Nomencl.* 4 : 179—180—points (3)(a) and (3)(b)).

involved can be rejected as a homonym. The International Commission is hereby requested to render a *Declaration* on this point.

22. It is hoped that before the International Commission reach a decision, it will have before it the views of representative parasitologists on the question whether the trivial name *dentatus* of Diesing, 1839, should be preserved by invocation of the Commission's Plenary Powers. Arguments are presented in opposition to suspension of the rules in this case.

23. It is recommended to the International Commission that the name *Stephanurus* Diesing, 1839 (type species, by monotypy : *Stephanurus dentatus* Diesing, 1839 [subjective synonym, *Sclerostoma pinguicola* Verrill, 1870 (= *Stephanurus pinguicola* (Verrill, 1870) comb. nov.)] be placed on the *Official List of Generic Names in Zoology*. At the same time, the valid trivial name of the kidney worm of swine should be placed on the *Official List of Specific Trivial Names in Zoology*. This will be either *dentatus* Diesing, 1839, as published in the binominal combination *Stephanurus dentatus*, if preserved by the International Commission through their Plenary Powers, or, if not, *pinguicola* Verrill, 1870, as published in the binominal combination *Sclerostoma pinguicola*. I hereby recommend the latter procedure.

24. The trivial name *dentatus* of Rudolphi, 1803, is the generally accepted name for the most common of the four nodular worms of swine. This nominal species is also type of the genus *Oesophagostomum* Molin, 1861. In order to complete the present case, it is recommended to the International Commission that the name *Oesophagostomum* Molin, 1861 (type species, by subsequent selection (Stiles and Hassall, 1905) : *Strongylus dentatus* Rudolphi, 1803) also be placed on the *Official List of Generic Names in Zoology* and that at the same time the trivial name *dentatus* Rudolphi, 1803, as published in the binominal combination *Strongylus dentatus*, be placed on the *Official List of Specific Trivial Names in Zoology* and identified with the definitive description and figures of Goodey (1924, pp. 1—14, figs. 1—15).

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II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : On the receipt of Dr. Dougherty's preliminary communication of January 1945, the question of the availability of the specific name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, was allotted the Registered Number Z.N.(S.) 188.

3. Submission by Dr. Ellsworth C. Dougherty in 1947 of a request for Rulings on the interpretation of certain aspects of the provisions in the "Règles" relating to specific homonymy : Correspondence in regard to the present case was exchanged between the Secretary and Dr. Dougherty, which led to the submission to the Commission by Dr. Dougherty in January 1947 of a request for Rulings on certain questions relating to the interpretation of Articles 35 and 36 of the *Règles* in regard to specific homonymy. It was considered that, if the questions of principle so involved were to be determined by the Commission, the question of the availability of the name *dentatus* Diesing,

1839, would no longer present any serious difficulty. The question of the revision of the foregoing Articles had by this time already been placed on the provisional Agenda for the meeting of the International Commission which had been fixed to take place in Paris in July 1948 concurrently with the meeting of the Thirteenth International Congress of Zoology. It was accordingly arranged that the question of the availability of the foregoing name for the Kidney Worm of Swine should be set on one side until after the interpretation of Articles 35 and 36 had been considered by the Commission at its Paris Session and decisions thereon had been taken by the Thirteenth International Congress.

4. Issue in 1947 of Public Notices : Although (as explained in paragraph 3 above) it had been decided that the Commission should not be asked to take a decision on the present case until after its Paris Session in 1948, it was judged that it would be advantageous to bring prominently before interested specialists the question of the availability of the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, and in particular, to ascertain whether, in the event of its being ruled that the foregoing name was an invalid junior secondary homonym of the name *dentatus* Rudolphi, 1803, as published in the combination *Strongylus dentatus*, any objection to the use of the Plenary Powers for the purpose of validating the name *dentatus* Diesing, 1839, would be likely to be forthcoming. Public Notice of the possible use of the Plenary Powers in this sense was accordingly given on 14th November 1947 in the manner prescribed by the Ninth International Congress of Zoology, Monaco, 1913. The issue of these Notices elicited no objection to the use of the Plenary Powers in the foregoing sense.

5. Submission of the present application in 1950: At its Session held in Paris in July 1948 the International Commission drew up detailed proposals for the revision of the provisions in the *Règles* (Articles 35 and 36) relating to specific homonymy (1950, *Bull. zool. Nomencl.* **4** : 118—125) and the proposals so submitted were approved and adopted by the Thirteenth International Congress of Zoology (1950, *ibid.* **5** : 63—64, 74, 131). The problem of the availability of the name *dentatus* Diesing, 1839, was considered in the light of the decisions taken in Paris

in relation to specific homonymy at a meeting between the Secretary to the Commission and Dr. Dougherty held at Mr. Hemming's London residence on 6th August 1948. It was then agreed that the case of the name *dentatus* Diesing needed to be presented afresh in the light of the Paris decisions and that the application so revised should contain a discussion of the possible use by the Commission of its Plenary Powers for the purpose of validating the foregoing specific name in the event of that name being found by the Commission to be invalid. It was further agreed that it would not be practicable for Dr. Dougherty to prepare the required application until after the Official Record of the Proceedings of the Commission in Paris had been published. That Record was published (in volumes 4 and 5 of the *Bulletin of Zoological Nomenclature*) at the beginning of 1950 and on 10th May of that year the application reproduced in paragraph 1 of the present *Opinion* was submitted to the Commission by Dr. Dougherty.

6. Submission by the Secretary of a note on certain of the issues raised in Dr. Dougherty's application : Upon the receipt of Dr. Dougherty's application Mr. Hemming, as Secretary, judged it desirable to prepare a short note drawing attention to the fact that Dr. Dougherty's paper raised two quite distinct issues, first, the status of the name *dentatus* Diesing, 1839, under the Law of Homonymy, second, the question whether, if the foregoing name were to be found invalid it was desirable that the Plenary Powers should be used to validate it. At the same time Mr. Hemming drew attention to one question of the interpretation of the Law of Homonymy which, as noted by Dr. Dougherty, was involved in the present case on which no express decision had been taken by the Paris Congress. This was the question whether, in order to establish a situation of secondary homonymy as between two given specific names, it was necessary for the author rejecting and replacing the later published of the two names, actually to cite both names in homonymous combinations as a preliminary to the rejection of the later name. On the second of the main issues raised in Dr. Dougherty's paper (the question of the possible validation of the name *dentatus* Diesing, 1839, under the Plenary Powers), Mr. Hemming appealed to specialists to furnish the Commission

with advice as to the action which it was desirable should be taken. Mr. Hemming's paper was as follows :—

**On the question of the desirability of retaining the trivial name
“*dentatus*” Diesing, 1839, as published in the binominal
combination “*Stephanurus dentatus*”, as the trivial
name of the Kidney Worm of Swine (Class Nematoda,
Order Rhabditida) : an appeal to parasitologists
for views on the question raised by
Dr. Ellsworth C. Dougherty**

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. In his application to the International Commission on Zoological Nomenclature on the subject of the trivial name properly applicable to the Kidney Worm of Swine (the type species of the genus *Stephanurus* Diesing), Dr. Ellsworth C. Dougherty discusses two separate questions : first, the question whether the trivial name *dentatus* Diesing, 1839, as published in the binominal combination *Stephanurus dentatus*, the first trivial name published for that species, should be regarded as an invalid name on the ground that it is a junior secondary homonym of the trivial name *dentatus* Rudolphi, 1803, as published in the binominal combination *Strongylus dentatus*, the two species having at different times been placed by different authors in the same genus ; second, the question whether, if *dentatus* Diesing, 1839, is, under the *Règles*, a name which must be rejected as a secondary homonym of *dentatus* Rudolphi, 1803, it is desirable that the International Commission on Zoological Nomenclature should use its Plenary Powers for the purpose of validating the name *dentatus* Diesing, 1839, as the name of the kidney worm of swine.

2. On the first of these questions, Dr. Dougherty points out that Magalhães (1894), Railliet (1896) and Tayler (1900) each “ definitely recognised, in their estimation, *dentatus* of Diesing, 1839, to be a secondary homonym of *dentatus* of Rudolphi, 1803 ” and “ accordingly rejected the former ”. Dr. Dougherty then refers to the decisions on the question of the rules governing specific homonymy taken by the Thirteenth International Congress of Zoology in Paris in 1948 and reaches the conclusion that, under the rules so revised, the trivial name *dentatus* Diesing, 1839, must be regarded as having been rendered permanently invalid by reason of the action taken by the authors cited above ; at the same time however, Dr. Dougherty recalls that in the past it has been argued that, in order to establish that a state of secondary homonymy exists, it is necessary not only for an author definitely to reject as a secondary homonym, the later published of any pair of homonyms but also to cite both species under the same combination of generic name and specific trivial name. In this.

connection, it is useful to recall that considerable discussion took place at the Sixth (Public) Meeting of the International Commission at its Paris Session regarding the criteria to be adopted in determining whether a given pair of names were to be regarded as secondary homonyms of one another; the object of this discussion was to devise criteria which would be clear and unambiguous, depending upon objective data and would at the same time be suitable for application not only to cases arising after the introduction of the new system but also to cases which had arisen prior to that date and to which the new system would need to be applied retrospectively. This discussion is recorded in considerable detail in the *Official Record of Proceedings* under heading (F) on pp. 112—115 of volume 4 of the *Bulletin of Zoological Nomenclature*. The formal record of the recommendation on this subject submitted by the Commission to, and later approved by, the Congress will be found embodied in points (8) and (9) of the Conclusion reached (see page 121 of the volume referred to above). At no time during these discussions was it suggested that the new provision to be adopted should require that, before two names could be regarded as being secondary homonyms of one another, each must be cited simultaneously by the same author under the same specific name (combination of generic name and specific trivial name), although (as stated by Dr. Dougherty) this argument had sometimes been advanced in the past by authors seeking to interpret the ambiguous provisions of the then-existing Article 35 (usually in relation to particular cases where the authors concerned were anxious to find reasons justifying the retention of a name which had been rejected by a former author as a secondary homonym but which was no longer considered congeneric with the other species bearing the same trivial name). Not only was no such argument advanced but, on the contrary, the view was strongly expressed that great care must be taken in the revision of Article 35 to avoid the inclusion of formal provisions of a "ritualistic" character of the kind which (as had previously been rightly pointed out by Dr. J. Brookes Knight (Smithsonian Institution, Washington, D.C.) had marred the amendment to Article 25 made by the Tenth International Congress of Zoology at Budapest in 1926). For this reason therefore it was expressly agreed that no definition of the procedure to be adopted by an author in rejecting one name as a secondary homonym of another should be inserted in the new rule and that, as regards rejections effected prior to 1st January 1951, the test to be applied should be simply whether or not the later author rejected the one name as a secondary homonym of the other. The "rejections" discussed by Dr. Dougherty in relation to the name *dentatus* Diesing, 1839, were all effected long before the Paris Congress and fall therefore to be judged by the above simple test. The evidence brought forward by Dr. Dougherty in regard to the action taken by de Magalhães, Railliet and Tayler in the last decade of the XIXth century clearly shows that those authors duly "rejected" the name *dentatus* Diesing, 1839, within the meaning of that term as used in Point (8) of the decision of the Paris Congress on this subject.

3. Appeal to parasitologists : The position which has now to be considered is therefore (as Dr. Dougherty points out) (1) whether or not confusion would result from the dropping (as an invalid homonym) of the name *dentatus* Diesing, 1839, as the trivial name of the Kidney Worm of Swine, that name being replaced by the name *pinguicola* Verrill, 1870, and (2) if the answer to the foregoing question is in the affirmative, whether the International Commission should prevent that confusion from arising by using its Plenary Powers to validate the name *dentatus* Diesing, 1839 for the Kidney Worm, that course being possible because the nodular worm to which the same trivial name had been given by Rudolphi in 1803 (in the combination *Strongylus dentatus*) is not considered congeneric with the Kidney Worm and in consequence, according to current taxonomic ideas, there would be no question of homonymy if the name *dentatus* Diesing were to be used for the Kidney Worm in the genus *Stephanurus* Diesing.

4. The foregoing is a matter on which the International Commission must naturally rely upon the views of parasitologists concerned with this group, who alone can advise on the relative merits of the question at issue (namely whether it is desirable that the name *dentatus* Diesing, 1839, or the name *pinguicola* Verrill, 1870, should be the valid name for the Kidney Worm of Swine).

5. Accordingly, it is particularly hoped that any parasitologist interested in this subject will be good enough to forward as soon as possible, to the Secretary to the Commission (address : 28 Park Village East, Regent's Park, London, N.W.1, England) a statement setting out his views for the consideration of the International Commission.

7. Publication of the present application : The present application as revised in January 1950 (paragraph 1 of the present *Opinion*) was sent to the printer in September 1950, together with the paper by the Secretary reproduced in paragraph 6 above. Various minor questions which arose in connection with the present case delayed publication which did not take place until 15th August 1951, when both the foregoing papers were published in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (Dougherty, 1951, *Bull. zool. Nomencl.* 2 : 282—291 ; Hemming, 1951, *ibid.* 2 : 291—293).

8. Issue of Public Notices in 1951 : Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given

on 15th August 1951 both in Double-Part 9/10 of volume 2 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Dougherty's application was published) and also to the other prescribed serial publications. In addition, Notice was given to certain specialist serial publications in Europe and America. The issue of these Notices elicited comments from seven specialists and groups of specialists. In some cases the specialists furnishing comments expressed the view that the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, was not a junior secondary homonym of the name *dentatus* Rudolphi, 1803, as published in the combination *Strongylus dentatus*, and therefore that it would not be necessary for the Commission to invoke its Plenary Powers for the purpose of validating the name *dentatus* Diesing. On the issue of policy, all the twenty-five specialists concerned were unanimous in holding the view that the name *dentatus* Diesing ought to be retained for the Kidney Worm of Swine either under the Plenary Powers or otherwise. The comments so received are reproduced in paragraphs 10—17 below.

9. Submission of a request for a "Declaration" clarifying an aspect of the Law of Homonymy in relation to the rejection and replacement of secondary homonyms: In order to avoid unnecessary delay in obtaining a decision on the question of the status of the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, Mr. Hemming, as Secretary, judged it desirable at once, to seek a decision from the International Commission on the aspect of the Law of Homonymy in relation to the rejection and replacement of secondary homonyms which was involved in the application in regard to the foregoing name submitted by Dr. Dougherty. The question involved, it will be recalled (paragraph 8) was whether at the time of the rejection and replacement of a secondary homonym it is necessary that the author rejecting such a name should actually cite the two names in homonymous combinations. In August 1951 Mr. Hemming prepared for submission to the Commission a paper in which he recommended the adoption by the Commission of a *Declaration* in the following terms:—"For the purposes of the provision relating to the rejection of secondary homonyms, an author rejecting one name as a secondary homonym of another name is required to make it clear

that he considers that the species bearing the trivial name so rejected is congeneric with another species bearing a previously published identical trivial name, but is free to indicate his view on this subject in whatever way he may consider appropriate, provided that the method so adopted leaves no reasonable doubt that he considers the two species concerned to be congeneric with one another". Mr. Hemming's paper containing the foregoing proposal was published on 28th September 1951 (Hemming, 1951, *Bull. zool. Nomencl.* 6 : 120—122)¹.

10. Comment on Dr. Dougherty's application received from Mr. Allen McIntosh (United States Department of Agriculture, Agricultural Research Administration, Bureau of Animal Industry, Agricultural Research Center, Beltsville, Maryland, U.S.A.) : On 30th January 1952 Mr. Allen McIntosh (*United States Department of Agriculture, Agricultural Research Administration, Bureau of Animal Industry, Agricultural Research Center, Beltsville, Maryland, U.S.A.*) submitted the following statement, in which he traversed the arguments advanced by Dr. Dougherty in support of the view that the name *dentatus* Diesing, 1839, was an invalid name by reason of being a junior secondary homonym of the name *dentatus* Rudolphi, 1803, consequent upon the two species having in the past been placed in the same genus and the former rejected as a secondary homonym of the latter (McIntosh, 1952, *Bull. zool. Nomencl.* 9 : 141—142) :—

With reference to the name of the swine kidney worm (Commission's Reference Z.N.(S.) 188) I wish to go on record as advocating the preservation of the name *Stephanurus dentatus* Diesing, 1839. To suppress the trivial name *dentatus* would, I believe, create a condition of endless confusion. The parasite is not only of considerable economic importance but has seldom been referred to by any other specific name. There are over 300 references to the parasite by this name and less than 25 references for the combined list of synonyms. It is of interest to note that the trivial name *pinguicola* Verrill, 1870, had never appeared in print in combination with the generic name *Stephanurus* until placed there by Dr. Ellsworth C. Dougherty (1951, *Bull. zool. Nomencl.* 2 : 286) in his discussion of the correct name for the swine kidney worm.

¹ For the later history of this application see paragraphs 18 and 19 of the present *Opinion*.

2. Notwithstanding the excellent discussion by Dougherty (*l.c.* 2 : 282—291), I believe there is some question as to whether there has ever been a condition of homonymy with reference to *Stephanurus dentatus* Diesing, 1839. To have a condition of homonymy it is necessary that two species with the same trivial name must be brought together under the same genus ; that is, the two species must be congeneric or so regarded.

3. In point (8) (1950, *Bull. zool. Nomencl.* 4 : 121) dealing with the rejection of secondary homonyms previous to 1st January 1951, an author is excused from the requirement of regarding the two species as being congeneric. Although not so stated in point (8), one must presume that the Code requires that before an author can reject a trivial name of a species, the species in question must have been placed in a genus containing another species with the identical trivial name. I contend that the case of *Stephanurus dentatus* Diesing, 1839, does not meet this requirement ; and I will endeavour to show that there has never been a time when the two species of swine parasites, each with the trivial name *dentatus*, have been brought together under the same genus either by their common trivial name or by any other trivial name.

4. Here are, arranged chronologically, certain pertinent facts about the two swine nematodes with the trivial name *dentatus* that should not be overlooked :—

- 1803. Rudolphi named and described *Strongylus dentatus*, a nodular worm of swine.
- 1809. Rudolphi listed *dentatus* Rud., 1803, under the genus *Sclerostoma*. *Sclerostoma* Rudolphi, 1809, is a synonym of *Strongylus* Mueller, 1780, both genera having the same type species.
- 1839. Diesing named and described *Stephanurus dentatus*, the kidney worm of swine, as a new genus and a new species.
- 1861. Molin proposed the genus *Oesophagostomum* with *subulatum* Molin, 1861 as type species, and placed *dentatus* Rudolphi, 1803, in the genus as a synonym of *subulatum* Molin, 1861. This action of Molin not only made the trivial name *dentatus* Rud., 1803, the valid type species of *Oesophagostomum*, but removed *dentatus* Rudolphi from future consideration under the genus *Strongylus* and its synonym *Sclerostoma*.
- 1870. Verrill named and described *Sclerostoma pinguicola*, a synonym of *Stephanurus dentatus*, Diesing, 1839. This date (1870) appears to be the earliest at which the kidney worm of swine was referred to the genus *Sclerostoma* (= *Strongylus*) nine years after *dentatus* Rud., 1803, had been removed

from the genus *Sclerostoma*. At this date (1870) the name *dentatus* Diesing, 1839, was not mentioned in combination with the genus *Sclerostoma*.

1874. Dean, in discussing the pathology of the kidney worm of swine, referred to the parasite as *Strongylus dentatus*, apparently a faulty determination, having confused the name of the parasite with the old name of the nodular worm of swine.
1894. De Magalhães was apparently the first author to raise the question of homonymy. He regarded *Stephanurus* as a synonym of *Strongylus* and believed that as at one time *Strongylus dentatus* Rudolphi, 1803, had been the name of a nodular worm of swine, the kidney worm of swine should take the trivial name *pinguicola* Verrill, 1870. At this date (1894) the trivial name *dentatus* Diesing, 1839, was not mentioned in combination with the genus *Strongylus*. Since de Magalhães did not indicate that he regarded *Oesophagostomum* Molin, 1861 (with *dentatus* Rudolphi as type species), as a synonym of *Strongylus* Mueller, 1780, he did not set up a condition of homonymy, as *dentatus* Rudolphi, 1803, had been removed from the genus *Strongylus* 33 years previously.
1896. Railliet's brief reference to *Stephanurus* as a synonym of *Sclerostomum* has been interpreted by Dougherty (*l.c.* : 285 (iii)) to mean that Railliet regarded the two species of swine parasites with the identical trivial name as being congeneric. This is contrary to the facts for Railliet not only in the paper on this date (1896 : 160), but in previous papers, as well as in later publications, recognised the genus *Oesophagostomum* which has *dentatus* Rudolphi, 1803, as type species.
1900. Tayler also regarded *Stephanurus* Diesing, 1839, as a synonym of *Sclerostoma*, but, contrary to the statement of Dougherty (*l.c.*), she did not regard the two parasites of swine with the same trivial name as being congeneric. In her publication of this date (1900 : 624) she referred to the nodular worm of swine as "*(Oesophagostoma dentatum)*". She did not use the trivial name *dentatus* Diesing, 1839, in combination with *Sclerostoma*.

5. At no time has any author placed the nodular worm of swine in the genus *Stephanurus* and at no time has any author placed the kidney worm of swine in the genus *Oesophagostomum*. In view of the above chronological facts it is difficult to comprehend how there can be a condition of homonymy involving the species *Stephanurus dentatus* Diesing, 1839.

6. Even should the views of the esteemed and learned members of the Commission, in this case, not agree with the interpretation outlined above, the writer desires to go on record as in favour of retaining the specific name *Stephanurus dentatus* Diesing, 1839, for the swine kidney worm.

11. Reply by Mr. Ellsworth C. Dougherty to the criticisms of certain of the arguments relating to the interpretation of the Law of Homonymy advanced in his application made by Mr. Allen McIntosh in his comment dated 30th January 1952 : In view of the fact that in his comment dated 30th January 1952 (reproduced in paragraph 10 above) Mr. Allen McIntosh had criticised as incorrect certain of the arguments regarding the status under the *Règles* of the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, advanced by Mr. Dougherty in his application relating to the present case (paragraph 1 of the present *Opinion*), Mr. Hemming, as Secretary, considered it appropriate to draw Dr. Dougherty's attention to Mr. McIntosh's paper and so afford him an opportunity of replying to the arguments put forward by Mr. McIntosh should he desire so to do. Dr. Dougherty took advantage of the opportunity so presented and on 11th March 1952 communicated the following statement for the consideration of the Commission :—

Comments on Mr. Allen McIntosh's letter dealing with the
name "*Stephanurus dentatus*" Diesing, 1839
(Class Nematoda, Order Rhabditida*)

By ELLSWORTH C. DOUGHERTY, Ph.D., M.D.
(Department of Zoology, University of California, Berkeley,
California)

Through the courtesy of Mr. Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, I have been able to examine a letter by Allen McIntosh (*Bull. zool. Nomencl.* 9 : 141—142) on the subject of the trivial name to be used for the species commonly referred to as *Stephanurus dentatus* Diesing, 1839.

2. Mr. McIntosh expresses a doubt that there should be any question of secondary homonymy with reference to the trivial name *dentatus* Diesing, 1839, in opposition to my assertion (1951, *Bull. zool. Nomencl.*

* Complete citations to the papers discussed herein, where not given, are to be found in my original communication (1951, *Bull. zool. Nomencl.* 2 : 282—291) (intl'd) E.C.D.

2 : 282—291) that this name has been treated and rejected by certain authors (de Magalhães ; Railliet ; and Tayler) as a secondary homonym of *dentatus* Rudolphi, 1803 (originally published in the binominal combination *Strongylus dentatus*). The consequence of Mr. McIntosh's analysis, if he were correct, would be to render unnecessary a use of Plenary Powers by the International Commission to secure the use of the name *dentatus* Diesing, 1839, in place of the name *pinguicola* Verrill, 1870.

3. Dr. McIntosh has cited several points in which he believes that I am mistaken in my paper (*loc. cit.*). I have reviewed these carefully and conclude that in two cases he is correct in asserting that I have erred ; these I will discuss shortly. However, the latter points are actually unimportant and inconsequential to the main issue ; and in certain assertions relating to the crux of the problem Mr. McIntosh is himself wrong.

4. He feels that no case of secondary homonymy has ever existed in the case of the trivial names *dentatus* Rudolphi, 1803, and *dentatus* Diesing, 1839, because the two species never have been *contemporaneously* included and cited in the same genus. However, it is possible to show that this involves an erroneous assumption.

5. Problems of secondary homonyms were considered in great detail at the Paris meetings of the International Committee on Zoological Nomenclature in 1948 and were reported in 1950 in vol. 4 of the *Bulletin of Zoological Nomenclature* (: 97—106). The discussion at Paris was based largely on a paper presented by Mr. Francis Hemming (1950, *Bull. zool. Nomencl.*, 3 : 32—54) in which various types of secondary homonyms were treated. It can be seen by reference to "case 'F'" in the chart following page 54 of Mr. Hemming's paper that identical specific names for different species need not be contemporaneous in order for their trivial names to be considered secondary homonyms. (Actually the examples of secondary homonymy given by Mr. Hemming do not exhaust the possible types, and the case of *dentatus* Rudolphi, 1803, *vs.* *dentatus* Diesing, 1839, most closely resembles, although is not identical to, "case 'F'".)

6. Mr. McIntosh contends that neither de Magalhães, Railliet, nor Tayler actually treated and cited *Strongylus dentatus* Rudolphi, 1803, and *Stephanurus dentatus* Diesing, 1839, as members of a single genus and thus that there could be no case of secondary homonymy. He is correct as regards Railliet and Tayler, my assertions (*loc. cit.* 285, para. 8(iii)) to the contrary, namely that these authors had themselves treated the two species as congeneric, being in error. However, it does not therefore follow that secondary homonymy is not involved, for both authors recognised, at least on an historical basis, that the two species had been members of the same genus, even if only at different times. This point is more completely treated in paragraph 10.

7. Moreover, as regards the action of de Magalhães, neither I nor Mr. McIntosh has presented all the facts correctly ; the latter's principal point is accurate, it is true—namely that Molin in 1861 had removed the species originally named *Strongylus dentatus* to a new genus *Oesophagostomum* and that de Magalhães did not specifically put it back again by declaring that *Oesophagostomum* was a synonym of *Strongylus*. However, I believe that this is not germane to the issue, as I shall show, and furthermore confused by Mr. McIntosh's assumption that Molin in effect made *Strongylus dentatus* the type of *Oesophagostomum*. Actually no type was selected for the genus until action by Stiles and Hassall in 1905.

8. Furthermore, Mr. McIntosh asserts that de Magalhães “regarded *Stephanurus* as a synonym of *Strongylus* and believed that as at one time *Strongylus dentatus* Rud., 1803, had been the name of a nodular worm of swine, the kidney worm of swine should take the trivial name *pinguicola* Verrill, 1870”. What the Brazilian worker actually said was : “Wenn der oben beschriebene Parasit der echte *Stephanurus dentatus* ist, und wenn das entsprechende Genus unterdrückt würde, indem man den Nematoden in das Genus *Strongylus* stellte, so würde der Speciesname *dentatus* unmöglich werden, weil es schon einen *Strongylus dentatus* R. giebt. Die Benennung *Strongylus* (*Sclerostomum*) *pinguicola* wäre nach meiner Ansicht allein anwendbar.”* I believe that we are entitled on the basis of this statement to assume only that de Magalhães conditionally treated both Rudolphi's and Diesing's species as belonging to the same genus and conditionally rejected *dentatus* Diesing, 1839, as a junior secondary homonym. In fact these are the sole interpretations that can be objectively made. De Magalhães did not indicate specifically when he regarded *Strongylus dentatus* Rudolphi, 1803, to have been the name of the nodular worm of swine. And, as regards Molin's previous action, we cannot be sure that de Magalhães even knew of it, for there is nothing in the latter's paper to indicate that he did. It is, I feel, unreasonable to expect in such cases, namely where species are discussed in a given genus, but have historically been assigned to other genera, that a given author be required to state expressly that he disagrees with all other placement of the species in question in order for his own placement of those species to be accepted as valid for nomenclatorial purposes ; it should be quite enough that he cite the species in a single genus. A contrary stand would produce much confusion in nomenclature by introducing a rigid standard impractical of application, as I am sure working with such a rule would shortly show.

* If the above described parasite is the true *Stephanurus dentatus* and if the corresponding genus were suppressed, the species name *dentatus* would become untenable, for there is already a *Strongylus dentatus* R[udolphi]. The designation *Strongylus* (*Sclerostomum*) *pinguicola* would alone be applicable in my opinion.

9. In so far as de Magalhães's conditional rejection of *dentatus* Diesing, 1839, is concerned, there might be an argument as to whether this should be interpreted in the sense of the International Commission's requirement that for a secondary homonym to be permanently rejected it be clear that such a rejection was made on the basis that the trivial name in question was the later published of a pair of secondary homonyms (see paragraph 10 for quotation of this rule). However, as regards Railliet's and Tayler's actions, there can be no doubt.

10. It must be admitted that the action of these two authors rendered *dentatus* Diesing, 1839, a junior secondary homonym of *dentatus* Rudolphi, 1803, in the sense of "case 'F'" in Mr. Hemming's paper and in the subsequent discussion of the International Commission at Paris in 1948 (*loc. cit.*). Thus, the fact that they cannot be assumed to have themselves considered the two species so named as congeneric does not invalidate their rejection of *dentatus* Diesing, 1839, as the following quotation from the Proceedings of the International Commission's 1948 meeting shows (*Bull. zool. Nomencl.* 4 : 121, para. (8)) : "... where, prior to midnight G.M.T. (Greenwich Mean Time), 31st December 1950/1st January 1951, an author makes it clear that he rejects a specific trivial name on the ground that it is part of the later published of a pair of secondary homonyms, that rejection is to be accepted as valid, irrespective of whether the author makes it clear that he himself considers that the condition of homonymy still exists, that is to say, whether he regards the two species as congeneric with one another."

11. In conclusion, it is thus possible to state that, despite minor errors in my historical presentation of the case of *Stephanurus dentatus* Diesing, 1839, the central issue of the invalidity of the trivial name in question still stands. It therefore remains necessary for the International Commission to decide between the trivial names *dentatus* Diesing, 1839, and *pinguicola* Verrill, 1870, and to invoke its Plenary Powers if the former is to be secured for the kidney worm of swine.

12. Comment received from Mr. John T. Lucker (Zoological Division, Agricultural Research Center, Beltsville, Maryland, U.S.A.) : On 6th February 1952 Mr. John T. Lucker (Zoological Division, Agricultural Research Center, Beltsville, Maryland, U.S.A.) submitted the following comment for the consideration of the Commission (Lucker, 1952, *Bull. zool. Nomencl.* 9 : 143) :—

In response to your "appeal to parasitologists" (Comm. ref. Z.N.(S.) 188) in connection with the scientific name of the kidney worm of swine, I recommend that the International Commission preserve the name, *Stephanurus dentatus* Diesing, 1839, for this worm, not by exercising its Plenary Powers, but by doing all in its power to see to it that the next International Congress shall revoke all provisions

of the Rules which presently do apply, or in the past have applied, to so-called secondary homonymy and shall substitute therefor provisions which will ensure for the past and future, that the priority of a trivial name, which was, or is, originally perfectly valid and available when proposed in a genus which also was, or is, perfectly valid and available when proposed, cannot be permanently impaired by any action of any subsequent author and that any author who recognises the genus so proposed, but who recognises as congeneric with the animal bearing this originally valid and available trivial name, no other animal for which the same trivial name was earlier validly proposed, shall have the right and obligation to use this trivial name for the animal in that genus.

13. Supplementary statement furnished by Mr. John T. Lucker :
On 8th August 1952 Mr. John T. Lucker submitted the following statement of his views on the present case by way of supplement to the statement contained in his letter of 6th February 1952 (paragraph 12 above) :—

**The case of “*Stephanurus dentatus*” Diesing, 1839 versus
“*Stephanurus pinguicola*” (Verrill, 1870) Dougherty, 1951
as the correct name of the kidney worm of swine**

In the published summary of this case (Dougherty, 1951, *Bull. zool. Nomencl.* 2(9/10) : 282—291) and the published comment thereon (Hemming, 1951a, *Ibidem* : 291—293), it has been stated that three authors, de Magalhães (1894a), Railliet (1896) and Tayler (1900) have “rejected”, or “apparently rejected” the specific trivial name *dentatus* Diesing for the kidney worm within the meaning of the provisions on secondary homonymy adopted by the Paris Congress of 1948.

2. Mr. Allen McIntosh has directed to the Secretary a communication in which he has challenged, or at least questioned, the claim that this name has been validly rejected under these provisions.

3. The present communication is a result of discussion of this case with Mr. McIntosh and inevitably repeats some of the points raised in his communication. It may be viewed as an elaboration of the same fundamental viewpoints held by him, but any errors of fact it contains, any faults in logic or ignorance of the principles of nomenclature, any misunderstanding of the Rules it displays are to be charged exclusively to the writer.

4. From the published accounts (Hemming, 1950a, *Bull. zool. Nomencl.* 3(1/3) : 37—54 ; Hemming, 1950b, *Bull. zool. Nomencl.* 4(4/6) : 107—125) of the discussions on homonymy which took place

in the Commission previous to the Paris Congress's adoption of the definitions and provisions drafted by the Commission, the average zoologist is, in the writer's opinion, entitled to reach such conclusions as follow : The adopted substitutes for Arts. 35 and 36 of the Rules state clearly and exactly the conditions under which a name is a homonym and the conditions under which a name in the past has been, and in the future can be, validly rejected as a homonym. No longer are highly developed legalistic talents or intimate familiarity with a logic special and peculiar to nomenclature required to determine if a name is a homonym, or if it has been validly rejected as such. The adopted definition and provisions say what they mean and mean what they say. Cases are to be decided exclusively on the basis of their language and those inferences which directly follow therefrom.

5. Hence, and since the present case has been submitted to the Commission partly as a test of the application of the "new regulations", the writer has felt free to attempt to determine independently whether the name *Stephanurus dentatus* is available for the kidney worm under these "regulations". His contentions are as follows :

The applicable provision and definitions

6. From examination of "Point (8)", of the "Paris decisions", stated (Hemming, 1951a, *l.c.*) to be the provision by which the "rejections" by the aforementioned authors are to be judged, the following facts and direct inferences emerge with respect to valid rejection as a secondary homonym :

(1) To be valid, the author's rejection must be based on a definite ground, i.e., "... the ground that it [the specific trivial name] is part of the later published of a pair of secondary homonyms ...".

Therefore, assuredly, just as from a law stating that my imprisonment is legal if I am imprisoned on the ground that I *am* a thief, it follows that my imprisonment is illegal if I *am proven not to be* a thief, so it follows under "Point (8)" that, if a name *is not* in fact (i.e., by definition) part of a pair of secondary homonyms, then a rejection of it on the ground that *it is* part of such a pair must be invalid.

(Precedent : A generic name, *Cyathostomum* Molin, 1861, was rejected as a homonym of *Cyathostoma* Blanchard, 1849 ; upon rendition by the Commission of an *Opinion* stipulating that generic names so differing in spelling are not homonyms, *Cyathostomum* Molin is available (sense of remarks by Hemming : *in litt.*).)

(2) The author making the rejection need not regard the two species as congeneric.

(3) "Point (8)" contains the following statement : "... irrespective of whether the author makes it clear that he himself considers that the condition of homonymy still exists, that is to say whether he regards the two species as congeneric ...".

7. Since this statement equates "condition of homonymy" and "congeneric" as synonymous terms, indubitably a condition of homonymy is thereby stated to exist only "where" two species are regarded as congeneric. Hence, if an author does not set up a condition of homonymy by himself regarding as congeneric two species with the same specific trivial name, his rejection obviously is invalid unless he provides evidence and grounds the rejection on the fact that some previous author has placed the species congenerically.

8. For it is nonsense to provide that an author can make a valid rejection without subscribing to the *continued existence* of the condition of homonymy, unless it is a requirement that *there must be in existence* a condition of homonymy (a congeneric placement of the species) which the author making the rejection has detected, but need not endorse.

9. Art. 35 has provided for many years that specific homonymy arises only when species are congenerically placed ; the "Paris decisions" cannot possibly have reversed Art. 35 on this point.

10. By examining the definition of "Secondary Homonym" and determining from it independently precisely the condition under which a specific trivial name can become part of a pair of secondary homonyms, it should be, and is, possible to test the validity of the inferences which have been drawn from the quotation from "Point (8)", given above as item "(3)". Obviously, it is also necessary to determine from this definition precisely what such a pair of homonyms is and whether anything in addition to the existence of a condition of homonymy is necessary to make a specific trivial name part of such a pair of homonyms.

11. This examination shows :

(1) A specific trivial name can become part of a pair of secondary homonyms only "where two species", originally placed "in different genera" and originally given the same specific trivial name, "are later placed in the same genus ...".

Naturally, the Rules do not define "genus", "species", or any other category. They, as is universally understood, deal exclusively with names for such categories. The very fact that the framers of the Rules did not deem it necessary to define a genus shows that a genus is what it is understood to be generally, as substantiated by dictionary definition. Thus : a genus is a category of classification,

precisely, a group of species considered closely related ; exceptionally one species comprises a genus.

Accordingly, by definition, a specific trivial name is not part of a pair of secondary homonyms unless two species, meeting the other requirements of the definition, are placed congenerically. This substantiates the conclusion that "Point (8)" provides that a specific trivial name is not validly rejected as a secondary homonym unless the author making the rejection bases it either upon his creation of, or his detection of, a congeneric placement of two species, both of which were originally designated by the specific trivial name.

(2) If the conditions designated "(1)" above are fulfilled, "... each of the specific names so formed is a 'secondary homonym' of the other specific name..." ; thus, the two specific names "so formed" together comprise the "pair of secondary homonyms" to which reference is made in "Point 8".

Although the definition may not explicitly state that "each of the specific names so formed" is the name of the genus in which the "two species... are later placed" combined with the originally published specific trivial name of the species, the meaning cannot be otherwise because, if either of the two species is placed in this genus under a specific trivial name differing from its original one, the "same name" is not applied to "two different species" and it is only "where" there is such application that "each of the names so used is a homonym of the other" (Definition : "Homonym"). It is scarcely necessary to remark additionally that a specific name is not formed except by a binominal combination of a generic and a specific trivial name and that a specific name has no nomenclatural status unless and until *it is published*.

**Their application to the publications in which it is alleged
"dentatus" Diesing has been validly rejected**

12. De Magalhães (1894a)

It has not been alleged (Dougherty, *l.c.*) by direct statement that de Magalhães rejected the generic name *Stephanurus* as a synonym ; but, this has been alleged in effect.

13. Actually, de Magalhães (1894a) said merely that if *Stephanurus* were to be regarded as a synonym of *Strongylus*, the specific trivial name *pinguicola*, in his opinion, would become correct for the kidney worm. He did not unconditionally suppress *Stephanurus* and it follows from this alone, the genus being monotypic, that he cannot be credited with having effected a rejection of *dentatus* Diesing.

14. Later, he (1894b) related the circumstances which he considered to show that *Stephanurus* owed its continued recognition as a name

for an independent genus only to the eminence of Diesing, but he still did not, in the writer's opinion, formally suppress *Stephanurus*; in effect, he left definite rejection of this name to any subsequent author who might agree with his tentative conclusion.

15. It has been stated (Dougherty, *l.c.*) that de Magalhães "... concluded that it [the kidney worm] belonged in *Strongylus* and accepted for it the name '*Strongylus (Sclerostomum) pingucicola*'". The writer concedes that de Magalhães did consider the kidney worm to belong in *Strongylus* (the title of his paper alone is evidence of this). However, nomenclatorially the Brazilian author did not implement his conclusion, because he published the above combination in a context which is conditionally and hypothetically expressed from beginning to end. Holding the view that de Magalhães left the kidney worm in *Stephanurus* and being firmly convinced also that he did nothing to alter the placement of the nodular worm in *Oesophagostomum*, the writer cannot agree with the allegation (Dougherty, *l.c.*) that the Brazilian author united these species "in the genus *Strongylus*".

16. It is true that de Magalhães used the name "*Strongylus dentatus* R." and no other, for the nodular worm. However, once the original generic position of this species had been rejected by the species' proper inclusion in a genus named *Oesophagostomum* by Molin (1861), surely merely the subsequent mention of the species under its original specific name, whether by de Magalhães or any other author, cannot be held to have automatically transferred the species back to *Strongylus*; certainly not, where, as was the case in de Magalhães' paper, there is a complete absence of any intent to effect a reallocation. An author cannot be held to have suppressed a generic name as a synonym, or to have rejected a particular species placement, if he is unaware of that generic name and that this species placement has been effected. De Magalhães' paper contains no evidence that this author either knew that *Oesophagostomum* had been proposed or that Rudolphi's species had been removed from *Strongylus* and included in a genus bearing the former name. The allegation (Dougherty, *l.c.*) that de Magalhães regarded the two species as congeneric probably cannot be either categorically denied or affirmed. But as already seen, the writer does deny that de Magalhães can be credited with having effected nomenclatorially a congeneric placement of the two species.

17. The evidence as to the degree to which de Magalhães considered the two worms related is only as follows: He discussed certain features of *Str. dentatus* R. and compared them with certain features of the kidney worm. He did this because it had been suggested that Rudolphi's species and the kidney worm might be the same species. It is clear that he decided, as a minimum, that they are not the same species. But, since this is the only point he wished to dispose of, he was not concerned with the exact degree to which they were unrelated

beyond the species level. He stated his conclusion in the equivalent of the following language : these considerations forbid a *putting*, or *grouping*, together of the kidney worm and *S. dentatus* R. Thus, it is anything but clear how distantly he thought the two worms related.

18. If the concluding incidental (his main purpose was to show that the worms available to him from the kidney fat of the pig did not have in some particulars the morphology ascribed to *Steph. dentatus* by Diesing, but agreed with Verrill's *Scl. pinguicola*) paragraph of his paper is accepted as evidence of his views as to the degree of relationship of the two species (the writer considers that it cannot be so construed) it would have to be said that objectively he differentiated the worms subgenerically ; but it must be kept in mind that at this point he had to mention the nodular worm under its original name to show why he believed *pinguicola* would have to be used for the kidney worm, if *Stephanurus* fell as a synonym.

19. In any event, as McIntosh (*in litt.*) pointed out, it is certain that what has been called de Magalhães's "rejection" of *dentatus* Diesing was based on nothing but the fact that *Str. dentatus* had been applied to the nodular worm and the view that use of *dentatus* for the kidney worm would not be proper for that species, if it were placed in *Strongylus*.

20. Railliet (1896)

This paper contains only a very brief statement to the following effect : The genus *Stephanurus* no longer exists and *Steph. dentatus*, the only species it contained, re-enters (or enters ; "rentre") the genus *Sclerostomum* under the name *Scl. pinguicola*. From careful study of the paper as a whole, there is good reason to conclude that this statement is reportorial and is not to be construed as an independent action by the French author. De Magalhães is the only author who had suggested that it might be desirable to reduce *Stephanurus* to synonymy and if Railliet's statement is adjudged reportorial, it must be based on de Magalhães' papers. In that event, on the foregoing analysis of de Magalhães' papers, Railliet's statement must further be construed to be an erroneous report.

21. For these reasons, the correctness of the allegation (Dougherty, *l.c.*) that Railliet is to be credited with having synonymized *Stephanurus* and *Sclerostomum* is doubtful. Definitely contrary to the allegation, there is, as pointed out by McIntosh (*in litt.*), no evidence that Railliet (1896) regarded the kidney and nodular worms as congeneric or united them in the genus *Sclerostoma* ; he did not even mention the nodular worm. As far as is known, neither previously nor subsequently did he reject *Oesophagostomum* or Molin's placement of the nodular worm in the genus of that name. He (1896), like de Magalhães, made no mention of the word homonym or any derivative of it.

22. If, contrary to the view here expressed, Railliet is held to have effected a rejection of *Stephanurus* as a synonym, still there is no evidence that his use of *pinguicola* for the kidney worm was based on anything other than the fact, and this only by implication, that the specific name *Scl. dentatum* had once been applied to the nodular worm.

23. Tayler (1900)

In view of the foregoing, the writer holds that of the three authors under consideration, Tayler alone effectively rejected *Stephanurus* and, therefore, alone took even the first step which under the "Paris decisions" obviously had to be accomplished, before the trivial name *dentatus* could become susceptible to valid rejection, any question of its rejection based on placement of an older species, *dentatus*, in *Stephanurus* not being at issue, and the genus so named being monotypic.

24. However, contrary to the allegation (Dougherty, *l.c.*), it is clear, as stated by McIntosh (*in litt.*), that she did not regard the two species in question in this case as congeneric. She mentioned the nodular worm only incidentally under the names *Str. dentatus* and *Oesoph. dentatum* in a manner which, reasonably interpreted, shows that she considered the latter its acceptable name. Moreover, she indicated her agreement with those helminthologists of her day who deemed *Strongylus* and *Sclerostoma* to be designations for separate genera belonging in separate subfamilies.

25. She did not base her use of the trivial name *pinguicola* for the kidney worm on a congeneric placement of this species and the nodular worm by any previous author. She repeated Railliet's report as to the name of the kidney worm. She summarized de Magalhães' paper, but failed to take cognizance of the conditional and hypothetical nature of its conclusion.

26. She did not create a condition of homonymy by effecting unwittingly a congeneric placement of the two species in question. She was rather equivocal in stating her opinion that *Stephanurus* ought to be synonymized with *Sclerostomum*. Nevertheless, she accomplished this synonymy because she applied *Sclerostomum pinguicola* Verrill to the kidney worm in preference to *Stephanurus dentatus*, which she listed as a synonym. However, to determine whether she placed this species and the nodular worm in the same genus, it must be asked: With what group of species did her action unite the kidney worm? The answer obviously is: With that group of species which at the time of her action constituted the genus named *Sclerostomum*. The nodular worm was not one of these species, for in 1900 it constituted part of the group of species, the genus, named *Oesophagostomum*.

27. She used, as "did" both of the other authors under discussion, only the trivial name *pinguicola* for the kidney worm in *Sclerostoma*. She did not ground her use of it on the fact of application of the same specific name to the kidney and nodular worms by any antecedent author. She merely mentioned the "rule of homonyms" as involved in the determination of the correct name of the kidney worm on placement of the species in *Sclerostoma* and said that Verrill's *pinguicola* must be accepted and Diesing's *dentatus* suppressed for the kidney worm in *Sclerostoma* because "there is already a binomial *Sclerostoma dentatum* (Rudolphi, 1803)".

Conclusion

28. None of these three authors has accomplished a valid rejection of the specific trivial name *dentatus* for the kidney worm under "Point (8)" and the definition of "Secondary homonym", which together require in application to this case that such a rejection must have been based on (1) congeneric placement of the kidney worm and the nodular worm and (2) the application of the same specific name to both species; neither of these grounds was the basis of what have been called the "rejections" by these authors.

Comment

29. Eventually, the Commissioners may wish to examine the "documentary evidence", i.e., the facts, in this case. Obviously, however, disagreement as to the nomenclatorial effect of the facts and as to what the "new regulations" provide is primarily responsible for the result that the above conclusion is contrary to the published one (Dougherty, *l.c.*, ; Hemming, 1951a).

30. Disagreement (1).

One apparent area of disagreement involves a proposition whose scope is not restricted to determination of questions of homonymy.

31. In the present "case", there are on one side the statement (Dougherty, *l.c.*) that three authors regarded the kidney and nodular worms as congeneric, uniting them either in the genus *Strongylus* or *Sclerostoma*, plus the apparent acceptance (Hemming, 1951a : 291) of such placement as a fulfilled condition; on the other side, the writer and McIntosh (at least in effect; *in litt.*) have made the reverse statement. The writer confesses his inability to determine exactly how closely de Magalhães subjectively deemed the two species to be related, but considers that that author effected no change in the generic allocation of either species.

32. Furthermore, in accounts of the Commission's discussions on homonymy, it is reported (Hemming, 1950a ; 1950b) that the acting

President (Hemming) stated that "Case 'F'", as published and diagrammed by Blackwelder (1948), "is an example of secondary homonyms". In "Case 'F'", there was no interval of time during which the group of species comprising the genus named "X-us" included* both of the species originally named "*albus*" trivially.

33. Hence it appears that these authors (Dougherty ; Hemming) would affirm a proposition which may be stated as follows : Two species are placed in the same genus whenever the condition is historically fulfilled that the same generic name has been published as part of a specific name for one of them and as part of a specific name for the other of them.

34. The idea underlying this proposition can only be that the terms genus and generic name are synonymous under the Rules. The writer considers that its falsity is demonstrated readily, as for example, by observing the result of making the indicated substitution at any of a number of points in the Commission's adopted recommendations on homonymy and by the fact of repeated reference therein to application of the *same name* "to different genera".

35. *Disagreement (2).*

Another apparent area of disagreement, closely related, however, to the one just stated, is as to the actions, or procedures, which effect nomenclatorially : (a) placement of a species in a genus ; (b) congeneric placement of two species ; (c) rejection of an accomplished reallocation of a species ; (d) rejection of a generic name as a synonym of another generic name.

36. *Disagreement (3).*

Do the adopted recommendations state that the publication of the same name for two species is a condition which must be fulfilled before any author can validly reject the trivial constituent of the name for either species on ground of secondary homonymy ?

37. It has been stated (Dougherty, *l.c.*) (a) that "Neither de Magalhães, Railliet, or Tayler specifically formed a combination

* Also, the definition requires the two species to be "later" placed in the same genus. Certainly "later" placement congenerically of two species, the stipulation being that they must be described originally in different genera, can be accomplished only after both species have been described. Yet, as the Secretary (Hemming, 1950a : 100) stated, in this hypothetical case, . . . "the transfer to genus 'X' of the species bearing the older trivial name was temporary" and " . . . entirely prior to . . . the description in that genus of the second of the species . . . with the trivial name *albus*."

between Diesing's . . . *dentatus* and the generic names to which they in effect transferred it ;"* and (b) that the view that homonymy does not exist in the absence of published identical names for two species seems to be " . . . not a necessary or even reasonable interpretation of the present rulings". Nevertheless, because some zoologists " . . . have held that an actual citation of the homonymous specific name is necessary before the trivial name involved can be rejected as a homonym . . . ", the Commission was requested to render a "*Declaration*", presumably, one stating that an author need not himself apply to each of two species the same homonymous specific name in order to reject effectively the trivial constituent of it for one of the species on ground of secondary homonymy.

38. In discussing this issue, the Secretary (Hemming, 1951a : 292) stated that it was not suggested before the Commission that the new provision " should require that before two names could be regarded as being secondary homonyms of one another, each must be cited simultaneously by the same author under the same specific name . . . ". To the writer, it is not clear from this discussion, nor from the later one by the same author (Hemming, 1951 b. *Bull. zool. Nomencl.* 6(4) : 120-122) whether the Secretary has contended that, under the adopted definitions and provisions, publication of the same name for two species need not be accomplished at all in order to render its trivial constituent rejectable for one of the species, or whether he contends only that it has been provided that the author who rejects the trivial constituent on ground of secondary homonymy need not republish the homonymous combinations. The writer agrees that the provisions do not state that the homonymous combinations must be published by the *same* author or by the author proposing the rejection. To his previous remarks on the basic question, he would add the fact that it is the actual language of " Point (9) " that an author's rejection is invalid unless he regards as congeneric the two species *bearing identical specific names* and rejects the later *published of these names*.

39. Disagreement (4).

It is possible that the position has been adopted that, under " Point (8) ", an author is to be held as having made a valid rejection, if he says or implies that he regards a name as a secondary homonym, irrespective of whether the name is a secondary homonym under the Congress' definition. This possibility emerges from the following statements : (1) " each of these authors is to be regarded as having definitely recognised, in their estimation, *dentatus* of Diesing, 1839 to be a secondary homonym . . . " (Dougherty, *l.c.*) ; (2) " as regards

* This language is interesting in connection with what is said above under item (1) of this section.

rejections effected prior to 1st January 1951, the test to be applied should simply be whether or not the later author rejected the one name as a secondary homonym of the other." (Hemming, 1951a.)

40. Therefore, it is believed that it would be helpful were the Commission to state clearly in connection with its decision in the present case, its majority position on the points itemized above.

14. Comment received from Dr. Harold W. Manter (University of Nebraska, Department of Zoology, Lincoln, Nebraska, U.S.A.) : On 27th September 1952 Dr. Harold W. Manter (*University of Nebraska, Department of Zoology, Lincoln, Nebraska, U.S.A.*) submitted the following comment on the present case (Manter, 1952, *Bull. zool. Nomencl.* 9 : 143) :—

It is probably too late to count, but, as a taxonomic helminthologist, I wish to object to the proposal of Dougherty (1951) to replace the trivial name *dentatus* of Diesing, 1839 (kidney worm of swine) with *pinguicola* of Verrill, 1870. The name *Stephanurus dentatus* is so well established in the literature both of parasitology and veterinary medicine that it surely should be validated.

Dougherty made his proposal in *Bull. zool. Nomencl.* 2 : 282—291 in August 1951.

15. Comment received from Dr. R. Ph. Dollfus (Laboratoire d'Helminthologie Coloniale et de Parasitologie Comparée, Muséum National d'Histoire Naturelle, Paris) : On 16th October 1952 Dr. R. Ph. Dollfus (*Laboratoire d'Helminthologie Coloniale et de Parasitologie Comparée, Muséum Nationale d'Histoire Naturelle, Paris*) submitted the following comment on the present case (Dollfus, 1952, *Bull. zool. Nomencl.* 9 : 144) :—

Je viens de recevoir un séparatum de E. C. Dougherty concernant la question de la possibilité de rejeter l'appellation *Stephanurus dentatus* Diesing, 1839, parce qu'il existe un *Strongylus dentatus* Rudolphi, 1803.

Comme Diesing d'une part, et Rudolphi d'autre part, n'ont pas employé le nom spécifique dans le même genre, il n'a eu aucune raison valable pour changer le nom spécifique employé par Diesing et toute controverse à ce sujet est, à mon avis, inutile ; c'est du temps perdu de discuter la-dessus. En outre, comme il est impossible de confondre des Nématodes aussi différents que *Stephanurus dentatus* Diesing et *Oesophagostomum dentatum* (Rudolphi), tout changement de ces appellations pourrait être nuisible.

Si quelques auteurs ont confondu ces deux espèces, cela montre à quel point ils sont incompétents en matière de Nématodes parasites et il n'y a pas à s'occuper de leur erreur.

16. Comment received jointly from Dr. Benjamin Schwartz (Chief, Zoological Division, United States Department of Agriculture, Bureau of Animal Industry, Washington, D.C., U.S.A.) and from eighteen other specialists : On 10th December 1952 Dr. Benjamin Schwartz (*Chief, Zoological Division, United States Department of Agriculture, Bureau of Animal Industry, Washington, D.C., U.S.A*) addressed the following letter to the Commission signed also by the eighteen other specialists whose names are cited in (b) below :—

(a) *Dr. Benjamin Schwartz's letter dated 10th December 1952*

With reference to the swine kidney worm (Commission's reference Z.N.(S.) 188), we have recently been informed by Dr. Harold W. Manter that the case is still open for the expression of opinions and comments.

Two members of our organization, Mr. Allen McIntosh and Mr. John T. Lucker, have each communicated with you expressing in detail their views on the history, importance and merit of the case. Being thoroughly familiar with the case and in agreement with the views held by our above-mentioned colleagues, we the undersigned wish to go on record as in favour of retaining the name *Stephanurus dentatus* Diesing, 1839, for the kidney worm of swine.

(b) *Names of the eighteen specialists who, in addition to Dr. Schwartz signed the letter reproduced in (a) above*

E. W. Price (*Parasitologist, Assistant Chief of Zoological Division*)
 L. A. Spindler (*Parasitologist, In Charge, Swine Parasite Investigations*)
 D. A. Shorb (*Parasitologist*)
 C. H. Hill (*Parasitologist*)
 A. O. Foster (*Parasitologist, In Charge, Anthelmintic Investigations*)
 F. D. Enzie (*Parasitologist*)
 M. L. Colglazier (*Parasitologist*)
 Mildred A. Doss (*Zoologist, In Charge, Index Catalogue of Medical and Veterinary Zoology*)
 Judith M. Humphrey (*Zoologist*)
 Maybelle B. Chitwood (*Parasitologist*)
 Everett E. Wehr (*Parasitologist, In Charge, Poultry Parasite Investigations*)

J. L. Gardiner (*Parasitologist*)

G. Dikmans (*Parasitologist, In Charge, Internal Parasites of Ruminants Investigations*)

K. C. Kates (*Parasitologist*)

James H. Turner (*Parasitologist*)

D. J. Doran (*Parasitologist*)

John C. Lotze (*Parasitologist*)

Charles G. Durbin (*Parasitologist*)

17. Comment received from Dr. B. G. Peters (Rothamsted Experimental Station, Harpenden, England) : On 1st January 1953, Dr. B. G. Peters (*Rothamsted Experimental Station, Harpenden, England*) submitted the following comment on the present case :—

At the suggestion of Dr. E. C. Dougherty, in a letter to Dr. T. Goodey, I am writing belatedly about Dougherty's paper on *Stephanurus* in *Bull. zool. Nomencl.* 2 (9/10) : 282—291, and about your commentary following it. The Commission's reference is Z.N.(S.) 188.

I confess to the authorship of the reference cited as "B.G.P." in Dougherty's list, and I also fully agree that "Therein the nomenclatorial issues were not directly faced". I was asked to prepare a brief summary of current knowledge about this parasite for semi-anonymous publication, and this seemed a most improper place in which to propose nomenclatural changes. In this regard I merely set out "The present accepted position", including past confusions with Rudolphi's *dentatus*, as the necessary minimum for clarity.

On the questions now at issue, I accept Dougherty's conclusions on the homonymy of *dentatus* Diesing, 1839, but disagree with his recommendation. *Stephanurus dentatus* Diesing, 1839 is a readily-identifiable parasite which has long been known under that name. Confusion with *Oesophagostomum dentatum* (Rudolphi, 1803) is most unlikely as between the actual worms ; it could occur only nomenclaturally when misguided helminthologists put the two species into one genus.

This seems to me a case where strict application of the Rules would lead to confusion, and I recommend that the International Commission should use its Plenary Powers to validate *dentatus* Diesing, 1839, in the combination *Stephanurus dentatus*, for the Kidney Worm of Swine.

I also recommend that the generic names *Stephanurus* Diesing, 1839 and *Oesophagostomum* Molin, 1861 should be placed on the *Official List of Generic Names*, and the trivial names *dentatus* Diesing

1839 and *dentatus* Rudolphi, 1803 on the *Official List of Specific Trivial Names*.

I do not wish to labour the point but, as I understand it, it is open to any incompetent person to publish a paper in which (say) the 20-odd roundworms called "*elongatus*" are placed in one genus and 19 of the names suppressed as homonyms. It would be intolerable if these 19 trivial names were for ever invalidated by such an action. In other words, we need to ensure that the nomenclatural proposals of individuals do not have irreparable after-effects until there is some measure of agreement about them.

18. Adoption by the International Commission in 1952 of a "Declaration" that it is not necessary for the purpose of the rejection and replacement of a junior secondary homonym that the author rejecting such a name should cite both the names in homonymous combinations : After the close of the prescribed six-month waiting period, the Secretary prepared a Voting Paper (V.P.(52)58) in which the Members of the Commission were asked to vote on the question of the adoption of a *Declaration* on the subject of the interpretation of the Law of Homonymy in relation to the rejection and replacement of secondary homonyms in the terms of the proposal submitted by the Secretary in his paper published on 28th September 1951 (paragraph 9 above). The foregoing Voting Paper was issued on 22nd May 1952 and the Prescribed Voting Period closed on 22nd August 1952. At the end of the Prescribed Voting Period fifteen (15) Commissioners had voted in favour of the proposed *Declaration*, none had voted against that proposal, and three had not returned the Voting Papers issued to them. Accordingly, on 23rd August 1952 the Secretary formally declared that the proposal submitted had been adopted by the Commission. In view, however, of the near approach of the meeting at Copenhagen of the Fourteenth International Congress of Zoology, it was decided that, contrary to the course which would otherwise have been adopted, arrangements should not be made for the immediate preparation and promulgation of a *Declaration* embodying the decision taken by the Commission in this matter, it being felt that it would be better to defer such action until after the International Commission had reported its decision in this matter to the forthcoming International Congress of Zoology.

19. Approval by the Fourteenth International Congress of Zoology of the proposal relating to the interpretation of the Law of Homonymy in relation to the rejection and replacement of secondary homonyms adopted by the International Commission in August 1952 : In pursuance of the decision described in the preceding paragraph, the *Declaration* adopted by the Commission in August 1952 that it was not necessary that, when a name is rejected as the junior of two secondary homonyms, the author so rejecting that name should cite both it and the other name in homonymous combinations was entered as Case No. 55 on the Agenda for the Colloquium on Zoological Nomenclature and for the meeting of the International Commission on Zoological Nomenclature to be held at Copenhagen in July 1953. The single document submitted in connection with this Item was a note by the Secretary setting out the terms of the *Declaration* adopted in this matter by the Commission and asking for approval by the Fourteenth International Congress of Zoology of the action so taken (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 432—433). The decision taken in this matter by the Commission—which (as already explained) was in the terms of the proposal originally submitted to the Commission (paragraph 9 above)—was approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, 1953, on the advice of the International Commission on Zoological Nomenclature, supported by the Colloquium on Zoological Nomenclature. The decision of the Congress on this subject was published on 31st December 1953 (*Copenhagen Decisions zool. Nomencl.* : 82, Decision 161)². Thus by the end of 1953 a decision had been reached on the one question of the interpretation of the *Règles* affecting the present case, on which a Ruling had previously been lacking and the ground had been cleared for the taking by the Commission of a decision on the status of the name *dentatus* Diesing, 1839, as the specific name of the Kidney Worm of Swine.

20. Submission of a note by the Secretary on the portion of the present application concerned with the interpretation of the Law of Homonymy : On 5th January 1954 Mr. Hemming, as Secretary,

² This decision was subsequently promulgated as *Declaration* 17 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* **9** : xlix—lx).

prepared the following note on the issues raised in Dr. Dougherty's application regarding the interpretation of the Law of Homonymy in relation to secondary homonymy, believing this to be desirable in view of the fact that clearly some of the specialists who had furnished comments on this case had done so without a full understanding of the revision of the *Règles* in this matter carried out by the Thirteenth International Congress of Zoology, Paris, 1948 :—

On the problem of homonymy raised in Dr. Ellsworth C. Dougherty's application regarding the name "dentatus" Diesing, 1839, as published in the combination "Stephanurus dentatus"

By FRANCIS HEMMING, C.M.G., C.B.E.,
Secretary to the International Commission on Zoological Nomenclature

In his application regarding the specific name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, Dr. Ellsworth C. Dougherty took the view that for the reasons explained below the foregoing name must be regarded as a permanently invalid name by reason of its having been rejected as being, within the genus *Sclerostoma* Rudolphi, 1809, a junior secondary homonym of the name *dentatus* Rudolphi, 1803, as published in the combination *Strongylus dentatus*. Dr. Dougherty concluded therefore that the oldest available name subjectively applicable to the foregoing species (the kidney worm of swine) was the name *pinguicola* Verrill, 1870, as published in the combination *Sclerostoma pinguicola*. At the same time Dr. Dougherty expressed the view that it might be possible to argue—though he did not consider that such an argument would be well founded—that for a specific name to be validly rejected as a junior secondary homonym, it was necessary that some author should actually have cited in identical homonymous binominal combinations both that name and also the name of the species bearing as its specific name, an older name consisting of the same word.

2. In some of the comments which have since been received, Dr. Dougherty's argument that the name *dentatus* Diesing, 1839, is a permanently invalid name by reason of its having been rejected and replaced as a secondary homonym has been misunderstood. Moreover, since the receipt of his application, the point at issue mentioned at the

end of the preceding paragraph has been settled by the Fourteenth International Congress of Zoology, Copenhagen, 1953. A brief note of explanation on each of these points may therefore be useful.

3. On the first of these points it is necessary, in order to examine the validity of Dr. Dougherty's argument, briefly to recall the relevant circumstances in the early history of the name *Stephanurus dentatus* Diesing, 1839. These are as follows :—(1) In 1856 Leidy referred the nominal species *Strongylus dentatus* Rudolphi, 1803, to the genus *Sclerostoma* Rudolphi, 1809 ; (2) In 1896 Railliet treated the generic name *Stephanurus* Diesing as a junior synonym of *Sclerostoma* Rudolphi and referred the type species of that genus (*Stephanurus dentatus* Diesing) to *Sclerostoma* ; at the same time he rejected the name *dentatus* Diesing and applied to that species the name *pinguicola* Verrill (*Sclerostoma pinguicola* Verrill, 1870). (3) Tayler in 1900 followed the same course as that previously adopted by Railliet. Neither of these authors regarded *Strongylus dentatus* Rudolphi as belonging to the genus *Sclerostoma*, but Railliet considered that, as he himself placed *Stephanurus dentatus* Diesing in that genus and as previous authors had placed *Strongylus dentatus* Rudolphi in it, it was necessary to reject the name *dentatus* Diesing as the specific portion of the junior of the two secondary homonyms which, as he thought, had thus been brought into existence, and to replace that name by the next name available for the species concerned, that is, by the name *pinguicola* Verrill. The view adopted by Tayler followed the same lines.

4. Having thus established the factual position in this matter, we are now in a position to determine whether the rejection of the name *dentatus* Diesing is valid under the *Règles* and therefore whether that name is permanently unavailable for the species to which it was given by Diesing. Up to 1948 this is a question to which, owing to the obscurities of Articles 35 and 36, it would have been impossible to obtain an answer, but the clarifications effected by the Paris Congress make the position absolutely clear. The relevant decisions are recorded in Points (8) and (9) on page 121 of volume 4 of the *Bulletin of Zoological Nomenclature*. The decision then incorporated into the *Règles* was twofold : (1) After 31st December 1950 no name can be validly rejected as a junior secondary homonym of another name, unless the author rejecting that name "makes it clear (a) that he regards as congeneric the two species bearing identical specific names and (b) that he rejects the later published of these names as an invalid homonym of the other" (Point 9). In the period prior to 1st January 1951, the rejection of a name on the ground that in a given genus it is a junior secondary homonym of an older identical name "is to be accepted, irrespective of whether the author makes it clear that he himself considers that the condition of homonymy still exists, that is to

say, whether he regards the two species as congeneric with one another" (Point (8). (It will be understood that the purpose of the Congress, in making this distinction between past and future rejections of names on the ground of secondary homonymy, was to prevent the widespread changing of names which, by reason of the large number of names which had been rejected and replaced as secondary homonyms by authors who did not themselves consider the two species concerned to be congeneric, would have resulted if retrospective effect had been given to the new requirement that, in order that a rejection of one name as a junior secondary homonym of another may be a valid rejection, the author making it must make it clear that he himself regards the two species concerned as congeneric with one another.) The foregoing extracts from the provisions incorporated in the *Règles* on the subject of secondary homonymy by the Paris Congress make it clear that, subject to the supplementary point raised by Dr. Dougherty (as to which see the immediately following paragraph), the action of Railliet and Tayler in rejecting and replacing the name *dentatus* Diesing on the ground of secondary homonymy was valid, for this action was taken long before 1951, and in consequence the foregoing specific name was thereby rendered permanently unavailable.

5. The question of doubt raised by Dr. Dougherty (namely whether, in order validly to reject one name as a junior secondary homonym of another name, it is necessary for an author to cite both the names concerned in homonymous combinations) was one on which at the time that it was raised by Dr. Dougherty it was not possible to provide a definite answer. It was in these circumstances decided to postpone action on the present case until after a decision had been taken by the next International Congress of Zoology. This question was accordingly placed—as Case No. 55 (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 432—433)—on the Nomenclature Agenda for the Fourteenth International Congress of Zoology, Copenhagen, 1953. The decision of the Congress was that the formal citation of both names in homonymous combinations was not to be treated as a requirement for the valid rejection of one of those names as a junior secondary homonym of the other (1953, *Copenhagen Decisions zool. Nomencl.* : 82).

6. We see therefore that the action by Railliet (1896) and Tayler (1900) in rejecting and replacing the name *dentatus* Diesing, 1839, on the ground of the existence of a condition of secondary homonymy with the name *dentatus* Rudolphi, 1803, in the genus *Sclerostoma* is in full accord with the provisions of the *Règles* as amended by the Paris (1948) Congress (paragraph 4 above) and that the one point of doubt raised by Dr. Dougherty in his application has been resolved by a decision by the Copenhagen (1953) Congress (paragraph 5 above).

7. Accordingly, the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, is a permanently invalid name by reason of its having been rejected on the ground of secondary homonymy. The only question which remains for consideration is whether, having regard to the fact that for many years past the kidney worm of swine (*Stephanurus dentatus* Diesing) and the common nodular worm of swine (*Strongylus dentatus* Rudolphi) have been regarded by specialists as belonging to different genera, it is desirable that the International Commission should, in the interest of promoting nomenclatorial stability, use its Plenary Powers for the purpose of validating the name *dentatus* Diesing, 1839, as the name of the kidney worm of swine.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

21. Issue of Voting Paper V.P.(54)12 : On 27th February 1954 a Voting Paper (V.P.(54)12) was issued to the Members of the Commission in regard to the present case, in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus* set out at the foot of the present Voting Paper". This proposal was put forward as being, in part, an amendment to the proposal submitted by Dr. Dougherty. The proposal on which the Members of the Commission were thus asked to vote was in the following terms :—

(1) Under the Plenary Powers the specific name *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus*, is hereby validated.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* :—(a) *Stephanurus* Diesing,

1839, (gender of name : masculine) (type species by monotypy : *Stephanurus dentatus* Diesing, 1839) ; (b) *Oesophagostomum* Molin, 1861 (gender of generic name : neuter) (type species by selection by Stiles & Hassall (1905) : *Strongylus dentatus* Rudolphi, 1803 (as defined by the description and figures published by Goodey (1924 : 1—14, figs. 1—15)).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* :—(a) *dentatus* Diesing, 1839, as published in the combination *Stephanurus dentatus* ; (b) *dentatus* Rudolphi, 1803, as published in the combination *Strongylus dentatus*, as defined in (2) (b) above.

22. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 27th May 1954.

23. Particulars of the Voting on Voting Paper V.P.(54)12 : The state of the voting on Voting Paper V.P.(54)12 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following nineteen (19) Commissioners (arranged in the order in which Votes were received) :*

Holthuis ; Hering ; Vokes ; Boschma ; Riley ;
do Amaral ; Esaki ; Lemche ; Sylvester-Bradley ;
Dymond ; Hemming ; Bonnet ; Cabrera ; Mertens ;
Hankó ; Pearson ; Jaczewski ; Bradley, (J. C.) ;
Stoll ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned* :

None.

24. Declaration of Result of Vote : On 28th May 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(54)12, signed a Certificate that the Votes cast were as set out in paragraph 23 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

25. Preparation of the Ruling given in the present " Opinion " : On 5th November 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(54)12.

26. The following are the original references for the names placed on *Official Lists* by the Ruling given in the present *Opinion* :—

dentatus, *Stephanurus*, Diesing, 1839, *Ann. Wiener Mus. Naturgesch.* 2 (2) : 232

dentatus, *Strongylus*, Rudolphi, 1803, *Archiv. Zool.* (Wiedemann) 3 (2) : 12

Oesophagostomum Molin, 1861, *Mem. r. Ist. veneto Sci. Lett. Arti* 9 : 435, 443

Stephanurus Diesing, 1839, *Ann. Wiener Mus. Naturgesch.* 2 (2) : 232

27. The reference for the type selection for the genus *Oesophagostomum* Molin, 1861, specified Ruling (2)(b) in the present *Opinion* is the following :—Stiles & Hassall, 1905, *Bull. U.S. Bur. Anim. Ind.* 79 : 124.

28. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 122 has been allotted.

29. At the time of the submission of the original application dealt with in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

30. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary

to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

31. The present *Opinion* shall be known as *Opinion* Three Hundred and Forty (340) of the International Commission on Zoological Nomenclature.

DONE in London, this Fifth day of November, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING